Hardcopy

Welcome to the December issue of the Hardcopy newsletter. In the March issue, our newsletter will be combined with LVAUG's to save money. Hope you enjoy it. For now, here is the December issue of Hardcopy!

Joe Souder

View from the Top

Help! Help! Help!

Help for the newsletter...

programs...

membership...

We are in a period of cutback and consolidation as membership declines and we wait to see where it will end up.

We must plan for the future as the support from Atari and other manufacturers of software and hardware dry up for the eight bit which is already starting to dwindle on the sixteen bit.

It appears the only support we will receive is the user group network we set up with other groups. We would do well to get contacts in Europe, especially Germany user groups which I see as our only future. For example, the TI network lost support years ago but there are a network of groups still going...helping each other. If you have any ideas or contacts, please get in touch with someone on the Executive Board, so we can expand our base.

Paul Grover

The Help Key II Update: Part One

This is the first of what is hoped will be a series of columns dealing with the club's Bulletin Board System (BBS), The Help Key II. In future installments we'll cover any changes that may take place to the system, and we will go into a little detail on some of the more interesting recent additions to our on-line program library. For this first column however, we'll just cover some of the basic information needed to utilize the system and perhaps go into a few time saver tips.

First of all, the club's BBS is available exclusively for the use of members of ABE's ACEs. Each membership (individual or family) may ask for and receive a password that will give them 45 minutes of access to the system each day. 300 baud users will need much of that time if they find a number of files they wish to access. 1200 and 2400 baud users (the BBS supports all three speeds) will normally not need as much time.

To get started on a new BBS, it's always best to get whatever instructions you can about the system. ABE's ACEs has given each members several ways to get this information. A 15 page booklet is available which gives complete detailed instructions for the board. If you haven't received a copy, and would rather not wait for a meeting to ask for a copy, the same information contained in the booklet is available for downloading from the BBS. Just press [I]nformation from any main menu prompt and then request [H]elp with this BBS.

The BBS contains over 700 public domain program files which you may download at any time. About half of these are for the 8-bit Atari computer line and the other half are for the ST series of computers. As with everything else in a club such as ours, the BBS depends on club members for support. The club supplies the hardware, phone lines and someone to run it, but new programs and activity in the message base requires input from various club members. If you get on another BBS or pay service such as GEnie or Delphi, and you find an interesting file, please consider uploading a copy to our BBS so

that other members may benefit.

One feature of our BBS that is rarely used is its ability to take on-line polls or surveys. If you have a series of club-related questions you'd like to ask other club members, just send a message to the SysOp and he'll give you the information you need to set up the survey. For example, perhaps you'd like to organize a Special Interest Group within the club. A survey on the BBS could give you some useful information for your planning.

Between meetings, the BBS's message base is the best place to get answers to any computer questions or problems you might have. Speaking of messages... I promised I'd include at least one tip in this column and I'm running out of room so here's one that may save you some time. When you leave a message on the BBS, you must answer several questions in the header of the message. The BBS fills in the FROM: line with your name but you must fill in TO: by entering a name (or press RETURN for ALL) and SUBJECT: with the subject of you message (or press RETURN for NONE). After filling in these lines, the BBS asks if your message is private or public and then asks if the above information is correct or not. Many times I've seen users type in a name on the TO: line and then a long SUBJECT: and then go on to mark the message as a private one by mistake. They then answer no to the "is this correct" question and go back and fill in the same information again. No need!

The first time you fill in the TO: and SUBJECT: information, pressing a RETURN will give the default answers of ALL and NONE. If, however, you've filled in your own TO: and SUBJECT: information, and then make a mistake on the private/public question, the new defaults are now the information you just typed in. In other words, if you say the information is not correct, you can just type RETURN at the TO: and/or SUBJECT: prompts, and the information you entered last time will appear. While the explanation of this little hidden feature seems long and involved, its use is quite simple (pressing RETURN) and can save you some typing and on-line time.

Dennis John

Next Issue: March 1989.

Combined with LVAUG.

Article Deadline: Feb. meeting.

ATTENTION:

Starting Feb. 11th, Club Meeting at
Keystone Classroom 217/218 at N.C.A.C.C.
Speaker: Steve Jones will demo his 8 bit emulater

The ERGO Joystick

This is a new type of joystick that Wico has brought on the market. The ERGO joystick looks different, feels different and works great!

It fits in your left hand, working the trigger with the trigger finger of your left hand while holding the stick with the fingers (your choice) of the right hand. Sorry left handers, this is Right-Handed only, unless you are ambidextrous.

It is comfortable to hold, even has a place for the thumb of the left hand and clicks when you move the stick or press the trigger. Diagonal movement is somewhat tricky but that is true with most joysticks. I am so impressed with the way it feels and works that I would recommend it to anyone. My boys have used it, like it and even fight over using it.

It appears to be well constructed and should stand the test of time and not end up in your large box of other broken joysticks.
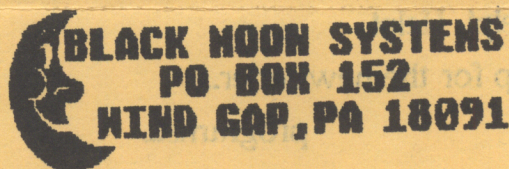
Paul Grover

Atari Corp. Phone Numbers

Reprinted from JACS' "Between Bytes"

Customer Relations - (408) 745-2367, (408) 745-5759

Customer Technical Support - (408) 745-2004

BBS lines - (408) 745-5308, (408) 745-5970, (408) 745-2642, (408) 745-4758, (408) 745-5664

User Group News (Elizabeth Shook) - (408) 745-2507

User Group Coordinator (Cindy Claveran) - (408) 745-2556

Hardware Hacker

by Russ Gladden

Printers and Interfacing Part II: Connecting Your Printer

Reprinted from the NAtO Newsletter of the Newfoundland Atari Owners

Last time we looked at the different types of printers available, and now we'll discuss the ways in which they may be interfaced with your computer.

The most common method of connecting printers is a parallel system developed by the Centronics company, and is therefore known as "Centronics parallel." The eight bits (1s and 0s) making up the ASCII value of a character to be printed are set as high or low voltages on the eight wires leading from the computer to the printer. The computer sets another line (known as the "strobe") high when the data bits are valid and ready to be printed. The printer accepts the full byte at once, then sets the "acknowledge" line high to tell the computer it was accepted, and is ready and waiting for the next byte. This sequence repeats over and over again for each character to be printed. The

Centronics parallel interface system also uses standard connectors on the computer end (25-pin DB-type) and printer end (36-pin), hence one may buy a "Centronics parallel printer cable" at most electronics stores and be assured it will work with almost any computer and printer supporting this standard. The other lines in the cable are rarely used, but can contain signals showing the printer is on line, an error has occurred, resets, etc. Atari ST computers (as well as many others) have a parallel printer port, while the eight bits require an interface (such as the Supra MPP-1150) to use this type of printer.

The other common method for connecting printers is the RS-232 serial system, and while not as popular as Centronics parallel, was sometimes used on early daisy-wheel printers. Instead of sending the bits all at once, they are sent one at a time along a single wire with start and stop bits added to keep both ends in synchronization. Another line is used to carry data from the printer back to the computer, and a couple of others sometimes used for "handshaking," again to keep things on track. A convenient analogy between the two systems is to imagine the bits marching single-file out of a serial port, but eight abreast from a parallel port. While a parallel connection is basically "plug in and forget," a serial set-up needs to be configured properly for the same Baud rate (number of bits per second, or roughly ten times the number of characters per second), as well as the number of stop bits, parity, and so on at each end. Although the parallel system is faster and easier to configure than serial, it is more prone to RF interference (both receiving and causing it), and requires many more conductors for cabling. RS-232 is also the most common method of connecting modems to computers. Again, an interface box is required to use serial printers on the 8-bit Ataris, while the ST may be set up to use its RS-232 port for printing via the Control Panel desk accessory.

A third type of interfacing we haven't mentioned is the direct-connect printers for Atari 8-bit computers. These plug right into the peripheral daisy chain without needing an external interface. While often slightly cheaper than buying a standard parallel printer and an interface, these are a poor investment, because for a few dollars more you can have a printer that may be connected to an ST or most other types of computers should you decide to upgrade, or in the worst case they would be easier to sell. Atari has produced several direct-connect printers, including the 1027 letter-quality printer and 1020 plotter. Axiom (Seikosha) has also made a few models like this.

A disadvantage of printers is that because of their mechanical nature, they take much longer to print the data than it takes the computer to send it. Hence the operator is

left to twiddle his thumbs while the computer waits for the printer to finish its output. This problem may be solved by using a print buffer, which is basically a big block of RAM (typically 64K to 256K) which accepts the data as fast as the computer can send it, then feeds it to the printer in its own time. Therefore the operator can go on using the computer while the buffer does the waiting for the printer. Buffers often have "Repeat" switches, which let the operator make multiple copies of a single print run without having to re-send it from the computer. Some printers also have buffers built in, usually about 2K in size (enough for one line of graphics, or a typical double spaced page of text). These may often be expanded to 64K or larger. The more memory a buffer has, the more data it can hold before having to wait for the printer. For example, if 100K of data is dumped to a 64K buffer, the first 36K worth will have to be printed before the computer is freed for use. This type of first-in, first-out buffering can also be done by the computer itself (where it is often referred to as a "spooler"). Output originally destined for the printer port is rapidly re-directed to an area of RAM where it is transferred back to the port in the background, so the computer can still be used while printing.

Useful PEEKs and POKEs for the 8 bit BASIC Programmer

by Dan Milisic

Reprinted from the NAtO newsletter of the Newfoundland Atari Owners

Here's a few POKE Commands that can be VERY useful to you 8-bit Programmers:

POKE 16,64 - This and POKE 53774,64 will disable the break key.

POKE 65,0 - POKE this to turn off the disk drive and cassette access beeping noise.

POKE 66,1 - Changes the sound of the CTRL-2 buzzer, and disables the repeat action of the keys.

POKE 77,128 - This will put your computer in attract mode, rotating the colors.

POKE 82,X - This sets the left margin of your screen to "X".

POKE 83,X - This sets the right margin of your screen to "X".

PEEK(186)+256*PEEK(187) - Returns the line number where a STOP or TRAP occured.

POKE 559,0 - Direct Memory Access (DMA) enable. This will turn off your screen and make your Atari up to 30% faster. POKE 559,34 to return to normal (usually).

POKE 581,1 - If you POKE this, and hit RESET, the computer will coldstart instead of warmstarting. POKE 580,0 is the default.

POKE 621,255 - This will disable the keyboard on an XL/XE.

POKE 622,255 - Follow this with a GRAPHICS 0 command and XL/XE users can get fine scrolling.

POKE 694,128 - This will make all input inverse video, you don't even have to press the Atari key!

POKE 730,X - Keyboard auto-repeat rate for XL/XE's. Normally 6, POKE in any number over 0 and experiment!

POKE 731,255 - For XL/XE users. This turns off the key click. POKE it with a 0 to enable it again.

POKE 752,1 - Turns off your cursor.

POKE 703,4 - Puts a text window at the bottom of a GRAPHICS 0 screen.

POKE 3818,48 and POKE 3822,123 - If you are using DOS 2.0 (NOT DOS 2.5 OR ANY OTHER!), this will allow you to use lowercase letters in filenames. You can even re-write DOS files to disk after this POKE, and the change will be permanent. Note that other DOSs may not be able to read your filenames now, however.

PEEK(53279) - This tests if one of the console keys have been pressed. You'll get a value between 0 and 7.

PEEK(53770) - Gives you a RANDOM number between 0 and 255.

POKE 54273,4 - This will turn your characters upside-down!

Well these are all the ones I could think of for now. If you need help with any BASIC program or these POKEs, let me know at a NAtO meeting, or send me Mail on the NAtO Base BBS.

Accelerating the ST

by Byron Johnson (GLASS User Group)

Reprinted from Michigan Atari Magazine

Just recently, I had to put my ST in the shop for repairs (I sure wish Atari had provided a connector for memory expansion) and borrowed another one from a friend. It made me realize how many improvements I had made to speed up the operation and make "computering" more enjoyable and productive. Perhaps you may benefit from my trials and tribulations in searching for the "Fastest ST alive."

First of all, let's concentrate on the existing features, then we'll move into the add-ons. The Control Panel Accessory is probably the best known ACC but the least utilized. Did you know that by changing the key repeat rate and key delay rate you can speed up page and line scrolling within programs like word processing, database, spreadsheets, and telecommunications programs not to mention practically every other text-orientated program. The slider next to the "finger on a key" changes the key delay rate, useful for typing a row of dashes, or moving across the page horizontally. The slider next to the rabbit and turtle controls "key repeat rate" and determines how many characters a second will be generated from holding down a key. Both of these keys need to be changed as your typing gets faster and you progress in this crazy game we call computing.

Next is the mouse double-click rate. It's the numbers 0 to 4 with the two mice next to them. It controls how fast or slow you can click the mouse and select an item. This also will change as your typing improves. Use a lower number to speed up the click select rate.

Whenever you first turn on your ST, you should always make a point of setting the date and time. This makes it easy to determine when you wrote a document and if it's a new or old version of a document. Since I use a monochrome monitor about 90 percent of the time, I like to reverse the colors, a black background and white letters.

This is a lot easier on my tired eyes after staring at a monitor at work all day. With color monitors, using a medium blue, green, brown, or black with a light color for text does about the same thing. Of course, after setting up the system the way you want, be sure and save the desktop for your next session. I sure wish this would work on the IBMs at work!

Now for the real goodies. Let's start with Universal Item Selector Version 2. When you run a word processor program, a file selector box will pop up on the screen and ask you for a file name to load or create. If you need a file from another drive, you have to click on the path line above the box and retype the line to access another drive. This gets to be a pain in the neck after a while. With Universal, just click the new drive letter, and it gets the directory for you with a single click. Plus it's faster than the built-in selector because it's written in assembly language. It also adds dozens of new and easier to use commands like MOVE, PRINT, RAM FREE, FIND, LOCK/UNLOCK FILES, and better disk formatting commands, etc. For eighteen dollars, it's a steal. You won't believe how much improved the ST is with this one.

Next is Turbo ST Version 2. This is a optimized version of existing text routines written in assembly language. Once again, much faster response and improved operation from this 41 dollar program.

If you do a lot of printing, then a external hardware print buffer is natural. This will allow you to print documents, text files, readme files and so on without tying up the computer. This one add-on feature alone will increase your productivity many times over. Even if only printing mailing or disk labels, or occasional doc files from the desktop, this buffer keeps you thinking and involved with your computer instead of waiting for a print-out to end.

The newest program in my auto folder is Mouse Doubler. It doubles the movement of the cursor, so you don't move the mouse as far as you used to. The little guy really moves! Next is a ram disk to speed up archive and un-archive operations, run compilers for programming languages, view slides very quickly and so many more applications. Many fine public domain ram disks are available, my favorite is ST1_RAM from ST Informer. This software creates a disk drive of any size in RAM memory. Assuming you have enough memory to run it (one megabyte usually needed).

If you've read this far, maybe a hard drive is in your future. Programs will load typically in four seconds not the usual twenty seconds from a 3.5" micro drive. Files also save much faster to a hard drive. The organizational capabilities keep all your regularly used software at your fingertips. Practically no time lost looking for a disk, plus you can configure the program just the way you want it and add on public domain upgrades and additional features without running out of disk space.

AND don't forget about the new TOS (Tramiel Operating System) due out this fall from Atari. I hear it's already available to developers, and is the first significant improvement made to the ST since TOS was put in ROM.

In the future, the Turbo ST folks are working on a graphics version of Turbo ST to speed up GEM functions. With the present success of the text version, I can't wait for the graphics version. As for Atari's blitter chip, where is the blitter chip? I

wonder if Atari will ever optimize and rewrite the operating system in assembly language, add multi-tasking, improve the hard drive capabilities (expanding the partition limit from 4 to 12 or more), expand the partition size from 16 to 32 megabytes, add better built-in sound, better graphics, a faster microprocessor, plug-in memory expansion modules, and a math co-processor? Well, I can hope, can't I?

Tandy 3 1/2" drives and STs

by Doug Samuel

Reprinted from JACS' "Between Bytes"

To connect the Tandy 3 1/2" external drive to the ST, the following connections must be made: ST Floppy Port Pin Function Tandy Drive Pin 1 Read Data 30 2 Side 0 Select 32 3 Ground Any Odd 4 Index 8 5 Drive 0 Select 10 6 Drive 1 Select 12 7 Ground Any Odd 8 Motor On 16 9 Direction In 18 10 Step 20 11 Write Data 22 12 Write Gate 24 13 Track 00 26 14 Write Protect 28. These connections may be made using two methods. The easiest would be to take an ST drive cable, cut off one connector, and connect the cable directly to the 34 pin header on the drive itself. This will directly bypass the circuit board inside the Tandy drive case. The major drawback to this method is the fact that you will not be able to unplug the cable from the drive. The other method, although more complicated, will allow you to utilize the 30 pin edge connector mounted in the back of the Tandy drive case. First remove all paths leading to the upper pads of the edge connector and all paths on the bottom side that do not lead to ground. At the point where the ribbon cable from the drive is attached to the circuit board, wire the necessary connections to the pads of the 30 pin edge connector. Remember, any odd number pin on the drive itself is ground, so connect one to the bottom connector pads of the circuit board being modified. Be sure to note each connector pad you are using, and it's corresponding function. Now attach the ST drive cable to a 30 pin edge plug in accordance with the wiring accomplished on the circuit board. Once wiring has been completed, place the jumper on the drive mechanism to the A0 position. If your computer won't recognize the drive, try the A1 position. The drive requires 12V 230mA and 5V 240mA for power. I use a standard PC power supply using either connectors P10 or P11. Editor's Note: This article was submitted to the JACS BBS by the author. Any question concerning this modification should be addressed to Doug Samuel. He may be reached on the JACS BBS 609-346-1224. Remember, JACS/ BETWEEN BYTES/ST POTPOURRI do not take any responsibility for any damage that may incur to the drive or computer.

[Editor's Note: This is a reprint from JACS/BETWEEN BYTES/ST POTPOURRI and ABE's ACEs and HARDCOPY do not take any responsibility for any damage that may incur to the drive or computer.]

Filename Extenders

Reprinted from SNACC, October 1988

The use of a standard set of filename extenders, whether for your own files or when uploading to your favorite BBS, will make it a lot easier to keep track of the file or program type. It will also be much easier for anyone downloading your files to use them.

The following list is currently recognized for use on CompuServe SIG*ATARI:

OBJ - Machine Language Object File

EXE - "Load and Go" Object File

COM - SpartaDOS COMmand File

BAS - SAVEd Atari BASIC Program

LST - LISTed BASIC Program

BXL - SAVEd BASIC XL Program

BXE - SAVEd BASIC XE Program

TUR - SAVEd TURBO BASIC Program

PIC - Picture Data File

AMS - Atari Music System

DOC - Documentation File

TXT - Text File

ASM - LISTed Assembler Source Code

M65 - SAVEd MAC 65 Source Code File

ACT - Action! Source Code File

PAS - Pascal Source Code File

CTB - Compiled Turbo BASIC Program

ARC - ARChived File

ALF - ALF CRUNCH File

DCM - DISKCOM File

BIN - CIS 'A-Protocol' Files ONLY

Season's Greetings from J & S Computers
(215) 966-4464

SIG Update:

If you are interested in joining a MIDI SIG, get in touch with Joe Souder at (215) 253-4466. Don't go by, give it a try!

If you would like to start your own SIG, contact Paul Grover or Rick Brodeur at the numbers on the back of this issue.

For Sale:

Avatex 1200 HC Modem.

ABE's ACEs

Allentown Bethlehem Easton's Atari Computer Enthusiasts is an independent user group organized and run by owners of Atari Computers. Atari is a trademark of Atari Corp.; all references should be so noted.

If you would like more information about ABE's ACEs, write us at the club's address or call the club HOTLINE at the number listed on this page.

This newsletter is published by ABE's ACEs on a tri-monthly basis (four issues per year). Opinions expressed in this newsletter are those of the author and not ABE's ACEs. All unsigned articles should be attributed to the Editor. This newsletter is provided free to our membership and on an exchange basis to other user groups. Original articles from our newsletters may be reprinted in other newsletters, provided credit be given to both author and source.

Submissions to the newsletter may be made via the club's BBS, via mail, or at the general meetings.

Club Numbers

Help Key II BBS:

Direct Line	(215) 759-2683
Call Forwarding	(215) 821-9222

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